

## REMARKS

In an Office Action dated August 26, 2004, the Examiner indicates that pending claims 1-16 are rejected as being anticipated by and rendered obvious over prior art. Claim 1 is objected to as including awkward language and appropriate correction is required. The drawings are objected to as not including reference signs 10 and 11 as mentioned in the description. The Information Disclosure Statement is cited as noncompliant for failing to include copies of documents submitted for consideration.

In response, Applicants file the present Reply with Amendment and Remarks. Entry and consideration hereof are respectfully requested. The Examiner's particular objections and rejections are now addressed in turn.

In the present office action, the information disclosure statement (IDS) is cited as failing to comply with the provisions of 37 C.F.R. §1.97 and §1.98 and MPEP §609 because copies of FR 1074160, FR 2759649, DE 2046445 and WO 93/03652 were not received.

Applicants respectfully disagree with the Examiner's holding and submit that the IDS was complete and proper when submitted on April 15, 2004 to the USPTO. Appended hereto as EXHIBIT 1 is a copy of Applicants' itemized postcard which accompanied the IDS. As set forth on the postcard, Applicants' filing of April 15, 2004 included the IDS, a Form PTO-1449, and copies of all thirty-six (36) references which were cited in the IDS. The USPTO stamped Applicants' postcard with the date of deposit of April 15, 2004. Thus, the USPTO acknowledged receipt of the postcard and all itemized contents thereof, including all thirty-six cited references of the IDS. Accordingly, Applicants provided and the USPTO received copies of the four documents mentioned above. Thus, the Examiner's objection to the IDS is improper and must be withdrawn. Nonetheless, Applicants provide herewith another copy of the four cited references at issue. Withdrawal of the objection, entry of the cited references, and consideration of the references as of the USPTO deposit date of April 15, 2004, are respectfully requested.

**AMENDMENTS TO THE DRAWINGS**

Replace originally filed Figures 1-10 with the three (3) Replacement Drawing Sheets appended hereto.

Examiner further contends that the International Search report has been considered, but is not an appropriate listing for an Information Disclosure Statement.

In response, Applicants respectfully direct the Examiner to MPEP §609 pertaining to information disclosure statements, which defines Applicants' duty to submit to the Office information which is material to patentability. 37 C.F.R. §1.98 defines that an Information Disclosure Statement shall include a list of all patents, publications, applications *or other information submitted for consideration by the Office*. Applicants have submitted for consideration an international search report and an itemized list of the cited references. Applicants submit that these items comply with the requirement for a list of all patents, publications, applications or other information submitted for consideration by the Office. Accordingly, Applicants request that the Examiner formally consider the International Search Report and indicate such on the Form PTO-1449 submitted by Applicants.

The Examiner objects to Applicants' drawings as failing to comply with 37 C.F.R. §1.84(p)(5) because they do not include references 10 and 11 mentioned in the description.

In reply, Applicants hereby submit corrected drawing sheets in compliance with 37 C.F.R. 1.121(d). The amended drawing sheet includes all of the figures appearing on the immediate prior version of the sheet. The replacement sheets are labeled "Replacement Sheet" in the page header (as per 37 C.F.R. §1.84(c)).

Reference number 10 is included on Figures 2, 6-7 and 9-10 of the Replacement Drawing Sheets to indicate the spring suspension mat. Reference number 11 is described on page 5, line 31 of the specification indicating the spring member. However, elsewhere in the specification and drawings, the spring member is indicated by reference number 12. Accordingly, the specification is herein amended to change the 11 to a 12. Amended specification reference number 12 is appropriately indicated in the drawings. No further changes to the drawing are affected with the Replacement Sheets. No new matter is added by way of the Replacement Drawing Sheets.

All of the Examiner drawing concerns are addressed and remedied in the accompanying Replacement Drawing Sheets. Accordingly, reconsideration and withdrawal of the outstanding drawing objections is respectfully requested.

Claim 1 is objected to because of an informality. Specifically, the Examiner asserts that the last paragraph of claim 1 includes awkward language. The Examiner requests appropriate correction.

In response, Applicant herein amends the last paragraph of claim 1 to more clearly set forth the invention. Accordingly, reconsideration and withdrawal of the outstanding claim 1 objection is respectfully requested.

Claims 1-6, 8-10, 14 and 16 are rejected under 35 U.S.C. §102(b) as being anticipated by foreign patent document DE 317362. Particularly, Examiner contends that DE 317362 teaches each and every limitation of claim 1.

In response, as will be shown herein, independent claim 1 is novel over the cited reference and thus dependent claims 2-6, 8-10, 14 and 16 are corresponding novel as variously depending upon allowable claim 1.

Independent claim 1 as amended recites a spring suspension mat comprising spring members, which are disposed in a first direction adjacent each other substantially parallel to a surface which is useable by a user, with a plurality of spring parts which are raised transversely relative to the useable surface and form with the spring members *one-piece portions of the spring members* and wherein the spring parts have a small bending radius such that, when loaded in a direction generally transversely relative to the usable surface, the spring parts are resiliently deformable and are reducible up to approximately the material strength of the spring parts and are placed in a folded-together condition.

An exemplary spring suspension mat 10, in one embodiment of Applicant's invention, is shown in Figure 1. Therein, spring members 12 are disposed adjacent each other and are interconnected transversely relative to their longitudinal extension, that is relative to the first direction. The first direction, in this exemplary embodiment, extends parallel to the usable surface of the mat. The spring members 12 have spring

parts 12a which are slightly raised transversely relative to the usable surface. The spring parts 12a are, however, *portions of the spring members 12*, which are *integral* with the spring members, and are *generally and continuously formed* from the latter. Detailed Description, Page 5, lines 31-33 through Page 6, lines 1-5.

DE 317362 does not teach or suggest a spring suspension mat comprising spring members, which are disposed in a first direction adjacent each other substantially parallel to a surface which is useable by a user, with a plurality of spring parts which are raised transversely relative to the useable surface and form with the spring members *one-piece portions of the spring members* as recited in amended claim 1. Instead, DE 317362 describes a spring member 2, 2', upon which spring parts 4 are attached. As can be seen from Figure 2 of DE 317362, spring part 4 is clip-like, including sections 4' and formings 5. Spring part 4 is attached to the spring member 2, 2' using a clip 6 that spans the between 2, 2' as shown in Figures 1-2. The spring parts 4 end at formings 5 and the formings 5 are then clipped into the clamps 6. This is expressly described on page 1, right column, lines 48-68. There it is explained that the spring parts 4 and 4' are exchangeable (line 58), and that each single spring part 4 and 4' obtains its fixation by inserting the end pieces 5 into the clamps arranged on both sides of the spring (lines 65-68). Therefore, spring part 4 is a separate element from the spring member 2, 2' and is not integral to the spring member 2, 2'. That is, DE 317362 does not teach spring parts which form, with the spring members, *one-piece portions* of the spring members, as recited in Applicants' amended claim 1. To the contrary, the spring parts of DE 317362 are clip-like elements that must be separately attached to the spring members by a clip.

Additionally, DE 317362 does not teach or suggest a spring suspension mat wherein spring parts have a small bending radius such that, when loaded in a direction generally transversely relative to the usable surface, the spring parts are resiliently deformable and are reducible up to approximately the material strength of the spring parts and are placed in a folded-together condition, as required by Applicants' amended claim 1.

To the contrary, DE 317362 describes spring members 2, 2', upon which spring parts 4 are attached. As can be seen from Figure 2 of DE 317362, spring part 4 is clip-like, including an arc-like top section, leg sections 4' and formings 5 where clamps 6 attach the spring 4 to the members 2, 2'. The junctures where leg sections 4' meet the arc-like top section and the formings 5 do not possess a small bending radius as recited in claim 1. That is, claim 1 recites a small bending radius such that when loaded in a transverse direction the spring parts are resiliently deformable and are reducible up to approximately the material strength of the spring parts and are placed in a folded-together condition. The bending radius of DE 317362 does not allow for this feature of Applicants' invention. As discussed above, spring part 4 is attached to the spring member 2, 2' using a clamp 6 that spans between members 2, 2' as shown in Figures 1-2. Each spring part 4 ends at formings 5 and is squeezed together to form the arc-like top section so that the formings can then be clipped into the clamps 6. Due to the distance between the clamps 6 and due to the relative lengths of the leg sections 4', it is not possible for the spring 4 to be resiliently deformable up to a material strength of the spring nor to be placed in a folded condition when loaded from above, as required by claim 1. To the contrary, when the arc-like top section is pressed down by a load, the radius created is such that the middle of the arc is deformed downwards, but the leg sections 4' still extend upward, i.e., there would be no folding of the spring 4 and, further, the spring 4 plastically (NOT resiliently) deforms when subjected to a certain load. If the load were not applied centrally to the arc-like top section, the spring part 4 deforms either to the left or to the right, but at the same time, the leg section 4' opposite the deformation direction remains substantially upright, i.e., again a folding condition is not attained.

In other words, when loaded in a transverse direction, the arc-like top section of the spring 4 deflects downward toward the members 2, 2' until the top section is completely or partially inverted, i.e., bent in a concave direction rather than the convex orientation shown in Figures 1-2. At this point, the top section of the spring 4 is supported by upwardly extending leg sections 4'. Due to the bending radius of the spring 4, further loading would necessarily collapse one or both of the leg sections 4' resulting in plastic deformation of the spring. DE 317362 does not teach or even

suggest a spring with a bending radius such that a resiliently deformed folded condition is assumed when the spring is loaded in a transverse direction, as recited in claim 1.

Thus, DE 317362 does not teach or suggest all of the limitations of the amended claim 1. Accordingly, the reference does not anticipate claim 1; reconsideration and withdrawal of the relevant §102 rejection is respectfully requested. Claims 2-6, 8-10, 14, and 16 are also rejected on novelty grounds in view of DE 317362. These claims, however, variously depend from claim 1 and are thus correspondingly novel over DE 317362; reconsideration and withdrawal of the relevant rejections is requested.

In the Office Action, claims 1, 2, 5-8, 10-12, 13 and 16 are further rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 5,747,140 to Heerklotz. Particularly, the Examiner contends that Heerklotz teaches each and every limitation of claim 1.

In response, as will be shown herein, independent claim 1 is novel over the cited reference and is thus allowable; dependent claims 2, 5-8, 10-12, 13 and 16 are corresponding allowable as variously depending upon allowable claim 1.

Independent claim 1 as amended recites a spring suspension mat comprising spring members, which are disposed in a first direction adjacent each other substantially parallel to a surface which is useable by a user, with a plurality of spring parts which are raised transversely relative to the useable surface, wherein the spring parts are deformable individually, independently of each other in a resilient manner also relative to the rest of the spring member.

Heerklotz does not teach or suggest a spring suspension mat comprising spring members with a plurality of spring parts, wherein the spring parts are deformable *individually*, independently of each other in a resilient manner *also relative to the rest of the spring member*, as required by claim 1. Instead, Heerklotz describes a grid plate with a wave profile. Abstract, lines 1-2. The grid plate is constructed as a body with solid portions passing through the maxima and minima of its wave contour. Col. 3, lines 18-20. In embodiments of the wave contour, there is no separation between adjacent waves. The spring parts are continuous without separations. Take for

example Figure 3 illustrating a wave profile. The wave has a crest 5 and a valley 6. As a wave can be considered from valley to valley, adjacent waves “meet” continuously at their respective valleys. The beginning of one wave and the end of the adjacent one cannot be isolated to a particular point or separation. Pushing down on the crest 5 will force movement of its valleys 6. Since the valleys 6 between waves are continuous, the adjacent wave will also be forced to move. That is, the spring parts are not deformable *individually, independently of each other in a resilient manner also relative to the rest of the spring member* as recited in amended claim 1. To the contrary, the Heerklotz waves have no particular point of separation and as one is deformed, it will consequently force other adjacent waves to move.

In like manner, Figures 9 and 10 illustrate other wave profile embodiments of Heerklotz. The waves have crests 5 and 6 and solid portions 2, 3'' and 3'''. A wave can be considered as extending from solid portion 2 to solid portion 2 along the direction of wave propagation 16 and including solid portions 3'' and 3''', respectively. Adjacent waves then “meet” at a common solid portion 2. In each case, another solid portion 2 is off center the wave for the next wave row parallel to it. Therefore, there is no distinct separation of the waves in the direction of wave propagation and rows of waves are intimately connected by the off-center solid portions 2. As similarly discussed above, applying a load to the profile at a crest 5 will force movement of its valleys 6 via 3'' and 3'''. Since waves in the direction of wave propagation share a common solid portion 2, adjacent waves will be forced to move. Additionally, since solid portions 3'' and 3''' are then connected to off-center solid sections 2, the waves in the adjacent row will also be forced to move. The stretching in the direction of wave propagation which occurs because the wave profile is flattened under a load, is compensated for by the compression of the arched, solid portions 3'' and 3''' extending in the direction of wave propagation. Col. 6, lines 15-19. “In the direction of wave propagation” must necessarily mean extension to other waves as they meet at a common solid portion 2 as detailed above. That is, the spring parts are not deformable *individually, independently of each other in a resilient manner also relative to the rest of the spring member* as recited in amended claim 1. To the contrary, the Heerklotz waves meet at a common solid portion within the direction of wave propagation while

being connected off-center by a solid portion to the next wave row, and as one wave is deformed, it will consequently force other adjacent waves to move.

Figure 7 of Heerklotz illustrates another example of a grid profile. Pairs of solid portions 3' meeting at an angular point are considered a single spring. Two pairs of solid portion 3' are connectively joined at their respective angular points by solid member 2. Pairs of solid portions 3' of the grid are described to deform "largely independently of one another." Col. 4, lines 63-65. However, these springs are connectively joined. Moving or deforming one of the points formed by a pair of the solid portions 3' will necessarily move adjacent portions 3' and adjacent members 2. Thus, the spring parts are not deformable *individually, independently of each other in a resilient manner also relative to the rest of the spring member* as recited in amended claim 1. To the contrary, the Heerklotz springs of Figure 7 are joined by a solid portion and as one spring is deformed, it will consequently force the connected spring to move.

Heerklotz clearly does not teach or suggest a spring suspension mat comprising spring members with a plurality of spring parts which are raised transversely relative to the useable surface, wherein the spring parts are deformable individually, independently of each other in a resilient manner also relative to the rest of the spring member, as recited by claim 1. Accordingly, independent claim 1 is novel over the cited reference. Claim 1 is not further objected to or rejected and is thus allowable. Claims 2, 5-8, 10-12, 13 and 16 are also rejected in view of Heerklotz. However, these claims variously depend from allowable claim 1 and are thus correspondingly allowable. Reconsideration and withdrawal of the novelty rejection of claims 1, 2, 5-8, 10-12, 13, and 16 is thus respectfully requested.

In the Office Action, 15 is rejected under 35 U.S.C. §103(a) as being obvious in view of foreign patent document DE 317362. Particularly, Examiner contends that it would have been an obvious matter of design choice to modify DE 317362 to have an overall height of spring suspension between 8 and 20mm since Applicant has not disclosed that having the height solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well at a variety of different heights.

Claim 15 depends from claim 1. As discussed above, independent claim 1 as amended is allowable. Therefore, claim 15 is correspondingly allowable as depending upon allowable claim 1; reconsideration and withdrawal of the relevant rejection is respectfully requested.

All of the objections and rejections are herein overcome. No new matter is added by way of the present Amendments and Remarks as support is found throughout the originally filed specification, claims and drawings. The application is now allowable to Applicants. Prompt issuance of Notice of Allowance is requested.

The Examiner is invited to contact Applicants' attorney at the below-listed phone number regarding this Response or otherwise concerning the present application.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,  
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Date: DEC. 27-2004

# EXHIBIT 1

THE STAMP OF THE PATENT OFFICE, PLACED HEREON, ACKNOWLEDGES RECEIPT OF:

Attorney Docket No.: REP-0022-P

Date Mailed: April 15, 2004

Applicant: Karl-Heinz Pfau et al.

For: SPRING SUSPENSION MAT

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Utility Patent Application Transmittal (4 pgs); Continuation-in-Part  
Specification (14 pgs); Claims (16); Formal Drawings (3 sheets);  
Declaration/POA (2 pgs); Preliminary Amendment (4 pgs); IDS (1 pg);  
Form PTO-1449 (7 pgs); Copies of (36) Cited References; Claim for  
Priority (1 pg); Certified Copies of (2) Priority Documents (9 pgs & 16  
pgs); Certificate of Mailing (1 pg); Filing Fee-\$385 Check; Post Card  
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